



INFORMATION DISCLOSURE CITATION

Docket No.:
RLL-256.3CIPUS

Serial No.: 10/552,455

Applicants: SALMAN *et al.*

Filed: 10/7/2005

Group:

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|---------------------|-----|-----------------|------------|---------------------------------|-------|----------|-------------------------------|
| | A1 | 2,490,714 | 12/6/1949 | Searle | 260 | 239 | |
| | A2 | 3,176,019 | 3/30/1965 | Campbell <i>et al.</i> | 260 | 293.4 | |
| | A3 | 5,001,160 | 3/19/1991 | McPherson <i>et al.</i> | 514 | 255 | |
| | A4 | 5,164,402 | 11/17/1992 | Brighty | 514 | 300 | |
| | A5 | 5,281,601 | 1/25/1994 | Cross <i>et al.</i> | 514 | 320 | |
| | A6 | 5,397,800 | 3/14/1995 | Alker <i>et al.</i> | 514 | 413 | |
| | A7 | 5,948,792 | 9/7/1999 | Tsuchiya <i>et al.</i> | 514 | 317 | |
| | A8 | 6,130,232 | 10/10/2000 | Mase <i>et al.</i> | 514 | 318 | |
| | A9 | 6,174,900 | 1/16/2001 | Okada <i>et al.</i> | 514 | 317 | |
| | A10 | 6,313,312 | 11/6/2001 | Banks <i>et al.</i> | 548 | 452 | |
| | A11 | 5,179,108 | 1/12/1993 | George <i>et al.</i> | 514 | 319 | |
| | A12 | 2003/0105071 | 6/5/2003 | Cuny <i>et al.</i> | 514 | 210.2 | |
| | A13 | 2003/0162780 | 8/28/2003 | Brotherton-Pleiss <i>et al.</i> | 514 | 235.5 | |
| | A14 | 2003/0171362 | 9/11/2003 | Madera <i>et al.</i> | 514 | 218 | |
| | A15 | 7,232,835 | 6/19/2007 | Mehta <i>et al.</i> | 514 | 323 | |

FOREIGN PATENT DOCUMENTS

| | | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION YES NO | |
|--|----|-----------------|------------|---------|-------|----------|-------------------------|--|
| | B1 | CA 2155320 | 8/19/1993 | Canada | C07D | 211/68 | | |
| | B2 | EP 0 325 571 | 7/26/1989 | EPO | C07C | 215/54 | | |
| | B3 | EP 0 388 054 | 9/19/1990 | EPO | C07D | 207/08 | | |
| | B4 | EP 0 413 455 | 2/20/1991 | EPO | C07D | 401/04 | | |
| | B5 | EP 0 613 232 | 8/31/1994 | EPO | H02M | 3/335 | | |
| | B6 | EP 0 801 067 | 10/15/1997 | EPO | C07D | 453/02 | | |

EXAMINER

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| | | | | | | |
|-----|----------------|------------|-------|------|--------|--|
| B7 | EP 0 823 423 | 2/11/1998 | EPO | C07D | 211/46 | |
| B8 | EP 0 863 141 | 9/9/1998 | EPO | C07D | 401/06 | |
| B9 | GB 940,540 | 10/30/1963 | UK | C07C | | |
| B10 | JP 135958/1994 | 5/17/1994 | Japan | C07D | 333/16 | |
| B11 | JP 92921/1994 | 4/5/1994 | Japan | C07C | 237/20 | |
| B12 | WO 91/09013 | 6/27/1991 | PCT | C07D | 207/08 | |
| B13 | WO 93/16018 | 8/19/1993 | PCT | C05F | 17/02 | |
| B14 | WO 93/16048 | 8/19/1993 | PCT | C07D | 211/26 | |
| B15 | WO 96/33973 | 10/31/1996 | PCT | C07D | 211/46 | |
| B16 | WO 97/45414 | 12/4/1997 | PCT | C07D | 211/58 | |
| B17 | WO 98/05641 | 2/12/1998 | PCT | C07D | 211/46 | |
| B18 | WO 98/29402 | 7/9/1998 | PCT | C07D | 311/20 | |
| B19 | WO 98/53814 | 12/3/1998 | PCT | A61K | 31/395 | |
| B20 | WO 01/42212 | 6/14/2001 | PCT | C07D | 211/48 | |
| B21 | WO 01/42213 | 6/14/2001 | PCT | C07D | 211/58 | |
| B22 | WO 01/90081 | 11/29/2001 | PCT | C07D | 241/08 | |
| B23 | WO 02/00652 | 1/3/2002 | PCT | C07D | 453/02 | |
| B24 | WO 02/04402 | 1/17/2002 | PCT | C07C | 219/10 | |
| B25 | WO 02/51841 | 7/4/2002 | PCT | C07D | 453/02 | |
| B26 | WO 02/06241 | 1/24/2002 | PCT | C07D | 223/16 | |
| B27 | WO 02/53564 | 7/11/2002 | PCT | C07D | 453/02 | |
| B28 | WO 04/004629 | 1/15/2004 | PCT | A61K | | |
| B29 | WO 04/005252 | 1/15/2004 | PCT | C07D | 209/52 | |
| B30 | WO 04/014363 | 2/19/2004 | PCT | A61K | 31/40 | |
| B31 | WO 04/014853 | 2/19/2004 | PCT | C07D | 209/02 | |
| B32 | WO 04/018422 | 3/4/2004 | PCT | C07D | 209/52 | |
| B33 | WO 04/052857 | 6/24/2004 | PCT | C07D | 209/52 | |

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| | | | | | | | |
|--|-----|----------------|------------|-----|------|--------|--|
| | B34 | WO 04/056767 | 7/8/2004 | PCT | C07D | 207/14 | |
| | B35 | WO 04/056810 | 7/8/2004 | PCT | C07D | 405/12 | |
| | B36 | WO 04/056811 | 7/8/2004 | PCT | C07D | 405/12 | |
| | B37 | WO 04/089900 | 10/21/2004 | PCT | C07D | 209/52 | |
| | B38 | WO 99/43657 | 9/2/1999 | PCT | C07D | 211/26 | |
| | B39 | WO 01/47893 | 7/5/2001 | PCT | C07D | 221/24 | |
| | B40 | WO 01/090082 | 11/29/2001 | PCT | C07D | 241/08 | |
| | B41 | WO 03/033495 | 4/24/2003 | PCT | C07D | 453/02 | |
| | B42 | WO 03/048124 | 6/12/2003 | PCT | C07D | 211/26 | |
| | B43 | WO 03/048125 | 6/12/2003 | PCT | C07D | 211/58 | |
| | B44 | WO 04/067510 | 8/12/2004 | PCT | C07D | 209/52 | |
| | B45 | WO 04/069835 | 8/19/2004 | PCT | C07D | 471/08 | |
| | B46 | WO 04/089363 | 10/21/2004 | PCT | A61K | 31/403 | |
| | B47 | WO 04/089898 | 10/21/2004 | PCT | C07D | 209/52 | |
| | B48 | WO 04/089899 | 10/21/2004 | PCT | C07D | 209/52 | |
| | B49 | WO 2005/092341 | 10/6/2005 | PCT | A61K | 31/496 | |
| | B50 | WO 2005/003587 | 1/12/2006 | PCT | A61K | 9/16 | |
| | B51 | WO 2006/035282 | 4/6/2006 | PCT | A61K | 31/439 | |
| | B52 | WO 2006/064304 | 6/22/2006 | PCT | C07D | 209/52 | |
| | | | | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| | |
|----|---|
| C1 | de Groat and Yoshimura, "Pharmacology of the Lower Urinary Tract", <i>Annual Review of Pharmacology and Toxicology</i> , 41:691-721 (2001) |
| C2 | Cheng and Prusoff, "Relationship between the inhibition constant (K_i) and the concentration of inhibitor which causes 50 per cent inhibition (I_{50}) of an enzymatic reaction", <i>Biochemical Pharmacology</i> , 22:3099-3108 (1973) |
| C3 | Birdsall et al., "Muscarinic receptors: it's a knockout", <i>Trends in Pharmacological Sciences</i> , 22(5):215-219 (2001) |

EXAMINER

DATE CONSIDERED

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| | | |
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| | Applicants: SALMAN <i>et al.</i> | |
| | Filed: 10/7/2005 | Group: |

| | |
|-----|--|
| C4 | Brighty et al., "Synthesis of (1 α ,5 α ,6 α)-6-Amino-3-azabicyclo[3.1.0]hexane, a Novel Achiral Diamine", <i>Synlett</i> , 1097-1099 (1996) |
| C5 | Braish et al., "Construction of the (1 α ,5 α ,6 α)-6-Amino-3-azabicyclo[3.1.0]hexane Ring System", <i>Synlett</i> , 1100-1102 (1996) |
| C6 | Chapple, "Muscarinic receptor antagonists in the treatment of overactive bladder", <i>Urology</i> , <u>55</u> (Suppl. 5A):33-46 (2000) |
| C7 | Eglen et al., "Muscarinic receptor ligands and their therapeutic potential", <i>Current Opinion in Chemical Biology</i> , <u>3</u> :426-432 (1999) |
| C8 | Eglen et al., "Therapeutic opportunities from muscarinic receptor research", <i>Trends in Pharmacological Sciences</i> , <u>22</u> (8):409-414 (2001) |
| C9 | Felder et al., "Therapeutic Opportunities for Muscarinic Receptors in the Central Nervous System", <i>Journal of Medicinal Chemistry</i> , <u>43</u> (23):4333-4353 (2000) |
| C10 | Grover et al., "Chiral Mandelic Acid Template Provides a Highly Practical Solution for (S)-Oxybutynin Synthesis", <i>Journal of Organic Chemistry</i> , <u>65</u> :6283-6287 (2000) |
| C11 | Shacklett and Smith, "The Preparation of Substituted Benzilic Acids", <i>Journal of the American Chemical Society</i> , <u>75</u> :2654-2657 (1953) |
| C12 | Sagara et al., "Cyclohexylmethylpiperidinyltriphenylpropioamide: A Selective Muscarinic M ₃ Antagonist Discriminating against the Other Receptor Subtypes", <i>Journal of Medicinal Chemistry</i> , <u>45</u> :984-987 (2002) |
| C13 | Nkpa and Chedekel, "Mechanistic Studies on the Addition of Cysteine to 3,4-Dihydroxyphenylalanine", <i>Journal of Organic Chemistry</i> , <u>46</u> :213-215 (1981) |
| C14 | Kadin and Cannon, "Esters of N-Methyl-3-hydroxypiperidine Having Psychotomimetic Activity. II", <i>Journal of Organic Chemistry</i> , <u>27</u> :240-245 (1962) |
| C15 | Broadley and Kelly, "Muscarinic Receptor Agonists and Antagonists", <i>Molecules</i> , <u>6</u> :142-193 (2001) |
| C16 | Moriya et al., "Affinity Profiles of Various Muscarinic Antagonists for Cloned Human Muscarinic Acetylcholine Receptor (mAChR) Subtypes and mAChRs in Rat Heart and Submandibular Gland", <i>Life Sciences</i> , <u>64</u> (25):2351-2358 (1999) |
| C17 | Kubo et al., "Cloning, sequencing and expression of complementary DNA encoding the muscarinic acetylcholine receptor", <i>Nature</i> , <u>323</u> (2):411-416 (1986) |
| C18 | Bonner et al., "Identification of a Family of Muscarinic Acetylcholine Receptor Genes", <i>Science</i> , <u>237</u> :527-531 (1987) |
| C19 | Steers, "The future direction of neuro-urology drug research", <i>Current Opinion in CPNS Investigational Drugs</i> , <u>2</u> (3):268-282 |
| C20 | Steers, Barrot, Wein, "Voiding dysfunction: diagnosis classification and management", In: <i>Adult and Pediatric Urology</i> , ed. Gillenwater, Grayhack, Howards, Duckett. Mosby, St. Louis, MO; 1220-1325, 3rd edition (1996) |

| | |
|---|-----------------|
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Group:

- | | |
|-----|---|
| C21 | Weinstock et al., "A General, One-Step Synthesis of α -keto Esters", <i>Synthetic Communications</i> , 11(12):943-946 (1981) |
| C22 | Vogel's textbook, "Practical Organic Chemistry" 1046-1047 (5th Ed.) |
| C23 | "Design of prodrugs", ed. H. Bundgaard, Elsevier (1985) |
| C24 | Kaiser et al, "Synthesis and Antimuscarinic Activity of Some 1-Cycloalkyl-1-hydroxy-1-phenyl-3-(4-substituted piperazinyl)-2-propanones and Related Compounds", <i>Journal of Medicinal Chemistry</i> , 36(5):610-616 (1993) |
| C25 | Carter et al, "Analogues of Oxybutynin. Synthesis and Antimuscarinic and Bladder Activity of Some Substituted 7-Amino-1-hydroxy-5-heptyn-2-ones and Related Compounds", <i>Journal of Medicinal Chemistry</i> , 34(10):3065-3074 (1991) |
| C26 | Morissette et al, "High-throughput crystallization: polymorphs, salts, co-crystals and solvates of pharmaceutical solids", <i>Advanced Drug Delivery Reviews</i> , 56:275-300 (2004) |
| | |
| | |

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